

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

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Accept

Setup Start *NS1*

Stop ***NS2***

Start Date: 4/11/2016 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 4/20/2016 Req'd Qty: 1.00 *1*

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run	Start	*NR1*
	Stop	*NR2*

Operation Description

Set Up/ Run Hours

Tool ID	Tool #	Plan Code
---------	--------	-----------

Accept Qty	Reject Qty	Reject Number	Insp. Stamp
		APR 19 2016	

0.00

130

Packaging

0.00

Packaging

Memo

Packaging

Identify and pack for shipping as per PPP 647.3702
Location: ADD

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.00

Quality Control

MLJ APR 20 2016

ML5 APR 20 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : ☐					

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Work Order ID: 144260

144260

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 4/11/2016

Required Date: 4/20/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 12.10.26 NEW ISSUE DD VERF:JLM
REV:B 15.01.26 as per ecr 14-214 DD VERF:JLM
PER REV NC3 15.03.18 JLM VERIFIED BY:DD

IPP
IPP REV:C AS

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status																		
601.3082		Purchased		No			Each	0.0000		6			DAS 28 9-89																		
601 3082									**	133363																					
RIVET																															
CR3212-4-1																															
647.3903	DAS 38 9-89	Manufactured		No			Each	0.0000		1			DAS 28 9-89																		
647 3903									**	144261																					
Deflector Assembly																															
647.3801		Manufactured		No		110	Each	8.0000	1	1			DAS 28 9-89																		
647 3801	DAS 38 9-89								**																						
412 Upper Cutter Assy																															
<table><tr><th>Location</th><th>Loc Qty</th><th>Loc Code</th></tr><tr><td>CCK028</td><td>8</td><td></td></tr><tr><td>124725</td><td>1</td><td></td></tr><tr><td>124726</td><td>2</td><td></td></tr><tr><td>124728</td><td>3</td><td></td></tr><tr><td>m129702</td><td>2</td><td></td></tr></table>														Location	Loc Qty	Loc Code	CCK028	8		124725	1		124726	2		124728	3		m129702	2	
Location	Loc Qty	Loc Code																													
CCK028	8																														
124725	1																														
124726	2																														
124728	3																														
m129702	2																														
647.3804		Manufactured		No		110	Each	5.0000	1	1			DAS 28 9-89																		
647 3804	DAS 38 9-89								**																						
Lower Cutter Assy High																															
<table><tr><th>Location</th><th>Loc Qty</th><th>Loc Code</th></tr><tr><td>cck27</td><td>5</td><td></td></tr><tr><td>141820</td><td>5</td><td></td></tr></table>														Location	Loc Qty	Loc Code	cck27	5		141820	5										
Location	Loc Qty	Loc Code																													
cck27	5																														
141820	5																														

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Work Order ID: 144260

144260

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 4/11/2016

Required Date: 4/20/2016

Start Qty: 1.00

Required Qty: 1.00

647.4410 Manufactured No

110 Each 18.0000 1 1

647 4410

DAS
38
9-89

**

Rail

Location	Loc Qty	Loc Code
CCK081	18	
120755	2	
120986	16	

DAS
6
9-89
28
9-89

647.4010 Manufactured No

110 Each 21.0000 1 1

647 4010

DAS
38
9-89

**

Wiper Deflector RH

Location	Loc Qty	Loc Code
cck87	21	
120740	17	
m129721	4	

DAS
6
9-89
28
9-89

647.4011 Manufactured No

110 Each 20.0000 1 1

647 4011

DAS
38
9-89

**

Wiper Deflector LH

Location	Loc Qty	Loc Code
cck78	20	
120741	16	
m129721	4	

DAS
6
9-89

647.4110 Manufactured No

110 Each 17.0000 1 1

647 4110

DAS
38
9-89

**

Doubler

Location	Loc Qty	Loc Code
CCK080	17	
120987	17	

DAS
6
9-89

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DAS
28
9-89

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Work Order ID: 144260

144260

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 4/11/2016

Required Date: 4/20/2016

Start Qty: 1.00

Required Qty: 1.00

647.4111
647 4111
Doubler

DAS
38
9-89
9-89

Manufactured No

110 Each 18.0000 1 1

**

DAS
6
9-89
DAS
28
9-89

Location

Loc Qty

Loc Code

cck111

18

120743

16

120967

2

647.4112
647 4112
Clip

DAS
38
9-89

Manufactured No

110 Each 6.0000 1 1

**

DAS
6
9-89
DAS
28
9-89

Location

Loc Qty

Loc Code

CCK112

6

126770

6

647.4113
647 4113
Clip

DAS
38
9-89

Manufactured No

110 Each 6.0000 1 1

**

DAS
6
9-89
DAS
28
9-89

Location

Loc Qty

Loc Code

CCK112

6

126771

6

647.4114
647 4114
Shim

DAS
38
9-89

Manufactured No

110 Each 41.0000 2 2

**

DAS
28
9-89
DAS
6
9-89
APR 11 2016

Location

Loc Qty

Loc Code

CCK112

41

120635

13

120746

28

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Work Order ID: 144260

144260

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 4/11/2016

Required Date: 4/20/2016

Start Qty: 1.00

Required Qty: 1.00

647.4115

Manufactured No

110

Each

26.0000

2

2

647 4115

Shim

DAS
38
9-89

**

Location

Loc Qty

Loc Code

CCK112

26

120747

26

647.4116

Manufactured No

110

Each

22.0000

1

1

647 4116

Shim

DAS
38
9-89

**

Location

Loc Qty

Loc Code

CCK112

22

120748

2

121064

20

647.4210

Manufactured No

110

Each

17.0000

1

1

647 4210

Bracket LH

DAS
38
9-89

**

Location

Loc Qty

Loc Code

CCK112

3

120749

3

CCK123

14

121086

14

647.4211

Manufactured No

110

Each

17.0000

1

1

647 4211

Bracket RH

DAS
38
9-89

**

Location

Loc Qty

Loc Code

CCK112

2

120750

2

CCK123

15

121134

15

APR 11 2016
28
9-89

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Work Order ID: 144260

144260

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 4/11/2016

Required Date: 4/20/2016

Start Qty: 1.00

Required Qty: 1.00

647.4311 Manufactured No

647 4311

RH Lower Strut

DAS
38
9-89

110 Each 2.0000 1 1

**

Location

Loc Qty

Loc Code

CCK67

2

126398

2

647.4310 Manufactured No

647 4310

LH Lower Strut

DAS
38
9-89

110 Each 21.0000 1 1

**

Location

Loc Qty

Loc Code

cck066

21

126395

19

126396

2

647.4312 Manufactured No

647 4312

LH Upper Strut

DAS
38
9-89

110 Each 2.0000 1 1

**

Location

Loc Qty

Loc Code

CCK67

2

126399

2

647.4313 Manufactured No

647 4313

RH Upper Strut

DAS
38
9-89

110 Each 2.0000 1 1

**

Location

Loc Qty

Loc Code

cck068

2

126401

2

DAS
8
9-89

DAS
28
9-89

DAS
8
9-89

DAS
28
9-89

DAS
8
9-89

DAS
28
9-89

DAS
8
9-89

DAS
28
9-89

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Work Order ID: 144260

144260

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 4/11/2016

Required Date: 4/20/2016

Start Qty: 1.00

Required Qty: 1.00

NAS1149FN832P

Purchased

No

110

Each

2,625.000

34

34

NAS1149FN832P

Washer

DAS
38
9-89

**

Location

Loc Qty

Loc Code

GA

475

M133316

16

M133769

459

ST260a

1200

M134257

1200

ST262

950

M133709

950

34

NAS1149F0332P

Purchased

No

110

Each

2,087.000

157

157

NAS1149F0332P

Washer

DAS
38
9-89

**

Location

Loc Qty

Loc Code

GA

312

m133709

312

ST262

1775

m134134

275

m134257

1500

157

MS27039-1-07

Purchased

No

110

Each

345.0000

12

12

MS27039-1-07

Screw

DAS
38
9-89

**

Location

Loc Qty

Loc Code

GA

334

125654

334

Return2016

1

m127813

1

ST281

10

m127813

10

3

9

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Work Order ID: 144260

144260

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 4/11/2016

Required Date: 4/20/2016

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-10

Purchased

No

110

Each

568.0000

42

42

MS27039-1-10

SCREW

DAS
38
9-89

**

DAS
6
9-89

Location

Loc Qty

Loc Code

CA

41

m128635

41

GA

18

m129541

18

over 006

300

m134567

300

ST280

209

m134370

209

42

MS27039-08-08

Purchased

No

110

Each

95.0000

16

16

MS27039-08-08

Screw

DAS
38
9-89

**

DAS
6
9-89 DAS
28
9-89

Location

Loc Qty

Loc Code

CA

8

m130113

8

ST278

87

m134142

87

16

MS27039-1-09

Purchased

No

110

Each

245.0000

14

14

MS27039-1-09

Screw

DAS
38
9-89

**

DAS
6
9-89

Location

Loc Qty

Loc Code

FP001

34

18057

34

GA

36

124859

36

ST280

175

m134167

175

14

APR 11 2016

DAS
28
9-89

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Work Order ID: 144260

144260

Parent Item: 647.3702

647.3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 4/11/2016

Required Date: 4/20/2016

Start Qty: 1.00

Required Qty: 1.00

MS27039-08-11

Purchased

No

110

Each

354.0000

2

2

MS27039-08-11

DAS
38
9-89

SCREW

Location

Loc Qty

Loc Code

ST278

354

m133769

354

2

DAS
6
9-89

DAS
28
9-89

MS24694-S49

Purchased

No

110

Each

224.0000

1

1

MS24694-S49

DAS
38
9-89

Screw

Location

Loc Qty

Loc Code

ST284

224

m129499

100

m129702

124

1

DAS
6
9-89

DAS
28
9-89

MS24694-C53

Purchased

No

110

Each

96.0000

8

8

MS24694-C53

DAS
38
9-89

Screw

Location

Loc Qty

Loc Code

ST285

96

m129702

96

6

DAS
6
9-89

DAS
28
9-89

601.3073

Purchased

No

110

Each

2.0000

1

1

601.3073

DAS
38
9-89

Connector

Location

Loc Qty

Loc Code

CCK099

2

M133781

2

1

DAS
6
9-89

DAS
28
9-89

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Work Order ID: 144260

144260

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 4/11/2016

Required Date: 4/20/2016

Start Qty: 1.00

Required Qty: 1.00

AN3-4A
AN3-4A
Bolt

DAS
38
9-89

Purchased

No

110 Each

346.0000

3 3

**

DAS
6
9-89

Location

Loc Qty

Loc Code

over003

300

m134502

300

ST350

46

m133990

46

3

AN3-11A
AN3-11A
Bolt

DAS
38
9-89

Purchased

No

110 Each

170.0000

8 8

**

DAS
8
9-89

Location

Loc Qty

Loc Code

ST349

170

m134167

170

8

AN3C10A
AN3C10A
Bolt

DAS
38
9-89

Purchased

No

110 Each

20.0000

2 2

**

DAS
6
9-89

Location

Loc Qty

Loc Code

ST349

20

m134167

20

2

CR3212-4-2
CR3212-4-2
Cherry Rivet

DAS
38
9-89

Purchased

No

110 Each

42.0000

6 6

**

DAS
6
9-89

Location

Loc Qty

Loc Code

ST320

42

m133363

42

5

CR3212-4-3
CR3212-4-3
Cherry Rivet

DAS
38
9-89

Purchased

No

110 Each

0.0000

17 17

**

119017

DAS
6
9-89

APR 11 2016

DAS
28
9-89

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Work Order ID: 144260

144260

Parent Item: 647.3702

647.3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 4/11/2016

Required Date: 4/20/2016

Start Qty: 1.00

Required Qty: 1.00

CR3212-4-4 CR3212-4-04 Purchased No

110 Each 0.0000 4 4

CR3212-4-4

CHERRY RIVET

CCR264SS3-04

Purchased No

110 Each 547.0000 12 12

CCR264SS3-04

Rivet

Location

Loc Qty

Loc Code

CCK004

400

123785

400

ST321

147

m129702

147

CCR264SS-3-03

Purchased No

110 Each 349.0000 16 16

CCR264SS-3-03

Rivet

Location

Loc Qty

Loc Code

LG001

165

m128606

33

m134023

132

ST321

184

m134396

184

CR3213-4-2

Purchased No

110 Each 316.0000 13 13

CR3213-4-2

Cherry Rivet

Location

Loc Qty

Loc Code

CCK003

192

123301

192

ST319

124

m131340

124

DAS

28

9-89

DAS

28

9-89

DAS

6

9-89

DAS

28

9-89

DAS

6

9-89

DAS

28

9-89

DAS

6

9-89

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Work Order ID: 144260

144260

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 4/11/2016

Required Date: 4/20/2016

Start Qty: 1.00

Required Qty: 1.00

CR3213-4-3 Purchased No 110 Each 498.0000 32 32
CR3213-4-3 DAS 38 9-89
 Rivet, Cherry

Location	Loc Qty	Loc Code
CCK004	140	
m129541	100	
m130388	40	
ST318	200	
m131340	200	
ST319	158	
123301	158	

CR3213-4-4 Purchased No 110 Each 219.0000 19 19
CR3213-4-4 DAS 38 9-89
 Rivet, Cherry

Location	Loc Qty	Loc Code
CCK005	100	
M134376	100	
ST319	119	
M130388	35	
M133694	84	

CR3213-4-5 Purchased No 110 Each 225.0000 42 42
CR3213-4-5 DAS 38 9-89
 Rivet 4-05 x8

Location	Loc Qty	Loc Code
CCK003	100	
M129913	100	
ST319	125	
M129913	125	

13416718
 1341362 x 34
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 DAS 6 9-89
 DAS 28 9-89

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Work Order ID: 144260

144260

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 4/11/2016

Required Date: 4/20/2016

Start Qty: 1.00

Required Qty: 1.00

CR3213-4-8

Purchased

No

110

Each

116.0000

4

4

CR3213-4-8

DAS
38
9-89

**

DAS
6
9-89
DAS
28
9-89

Rivet

Location

Loc Qty

Loc Code

ST319

116

123785

116

MS21042-3

MS21042L3

Purchased

No

110

Each

18.0000

79

79

MS21042-3

DAS
38
9-89

**

DAS
6
9-89
DAS
28
9-89

Nut / use MS21042L3

Location

Loc Qty

Loc Code

ST304

18

M129682

18

MS21042-08

MS21042L08

Purchased

No

110

Each

33.0000

18

18

MS21042-08

DAS
38
9-89

**

DAS
6
9-89
DAS
28
9-89

USE MS21042L08

Location

Loc Qty

Loc Code

ST304

25

122815

25

ST306

8

m130388

8

MS21047L06

Purchased

No

110

Each

64.0000

6

6

MS21047L 06

DAS
38
9-89

**

DAS
6
9-89
DAS
28
9-89

Nut Plate

Location

Loc Qty

Loc Code

ST303

64

m131340

64

APR 11 2016

Picklist Print

Page 13

April 08, 2016 3:49:59 PM

Work Order ID: 144260

144260

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 4/11/2016

Required Date: 4/20/2016

Start Qty: 1.00

Required Qty: 1.00

MS21047L08

Purchased

No

110

Each

57.0000

6

6

DAS
6
9-89

MS21047L08

Nut Plate

DAS
38
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

ST301

57

m129702

57

MS21047-3

Purchased

No

110

Each

163.0000

4

4

DAS
6
9-89

MS21047-3

Nut Plate

DAS
38
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

ST301

163

m134166

163

MS21071L3

Purchased

No

110

Each

198.0000

4

4

DAS
6
9-89

MS21071L3

ANCHOR NUT

DAS
38
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

ST299

98

m129702

98

ST301

100

125654

100

601.3083

Manufactured

No

110

Each

10.0000

1

1

DAS
6
9-89

DAS
28
9-89

601 308.3

Adhesive Rubber Seal

DAS
38
9-89

Location

Loc Qty

Loc Code

ckk009

10

m134349

10

601.1012

600.1012

Purchased

No

110

Each

0.0000

1

1

DAS
6
9-89

DAS
28
9-89

601 1012

Sealant (One 6 oz)

DAS
38
9-89

133938

600.1012
9/10/2016

APR 11 2016

April 08, 2016 3:49:59 PM

Shop Packet Print

Page 13

Picklist Print

April 08, 2016 3:49:59 PM

Page 14

Work Order ID: 144260

144260

Parent Item: 647.3702

647 3702

Parent Item Name: 412 Cable Cutter System, High

Start Date: 4/11/2016

Required Date: 4/20/2016

Start Qty: 1.00

Required Qty: 1.00

601.2045

Purchased

No

110

Each

17.0000

1

1

601 2045

RTV (LOCTITE 598)McMaster p/n: 6641A41

DAS
38
9-89

Location

Loc Qty

Loc Code

CCK096

9

m133588

9

GA

8

m134260

8

**

DAS

38

9-89

DAS
38
9-89

APR 11 2016



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

ENGINEERING CHANGE NOTICE NO.

04881

SHEET 1 OF 1

DWG NO. 647.3700

REV: N/C

PREPARED BY J. BECKER

DATE: 02/26/15

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: 412 CABLE CUTTERS KIT

APPROVED BY:

ENGR *[Signature]*

MFG

[Signature]

QC

EFF.

NEXT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: DELETED F/N 57, REVISED F/N 6.

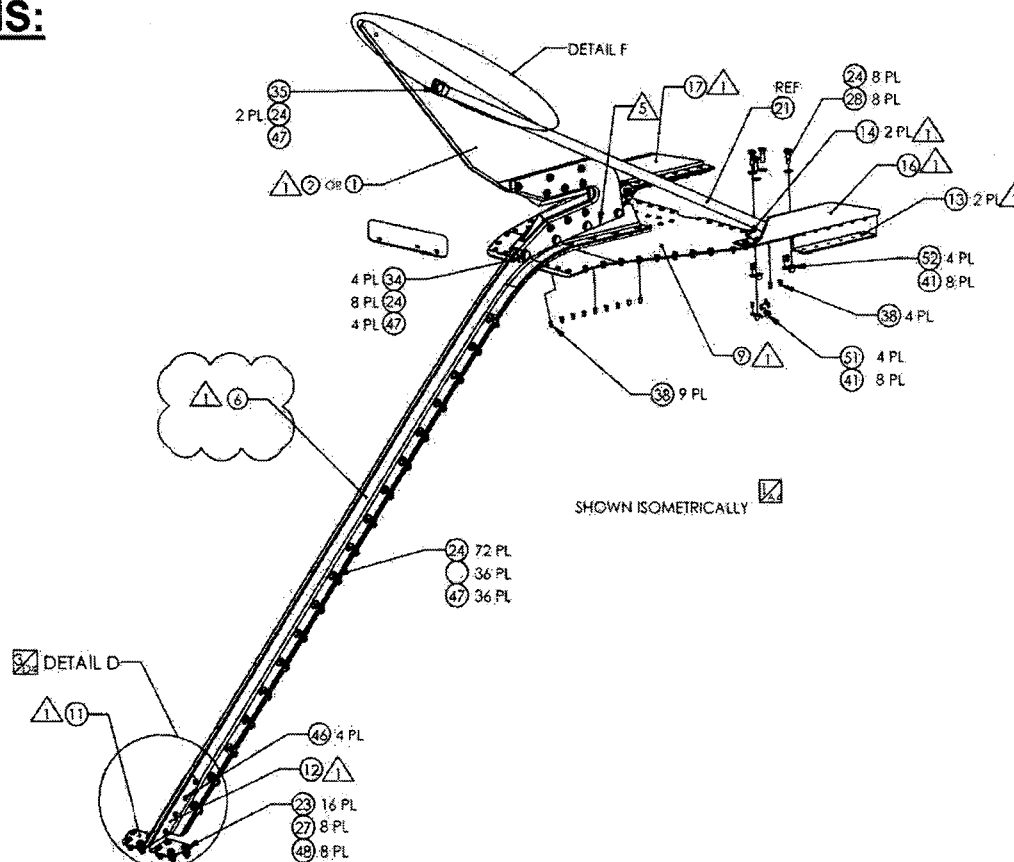
ECR:

N/A

ACTION ITEM:

1.

SHEET 1, ZONE C5 IS:



20160408

[Signature]
144260

57	D	647.3916	1	1	1	1	DEFLECTOR UPPER HALF		
6	R	647.3903	1	1	1	1	DEFLECTOR ASSEMBLY		
F/N/TC	PART NUMBER	3704	3703	3702	3701	QTY	DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:							CHANGE CATEGORY	DER REVIEW REQUIRED	
☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM							☐ MAJOR ☒ MINOR	☐ YES ☒ NO	



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

ENGINEERING CHANGE NOTICE NO.

04845

SHEET 1 OF 1

DWG NO. 647.3700

REV: N/C

PREPARED BY J. BECKER

DATE: 02/11/15

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: 412 CABLE CUTTERS KIT

APPROVED BY: ENGR

MFG

QC

EFF. NEXT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

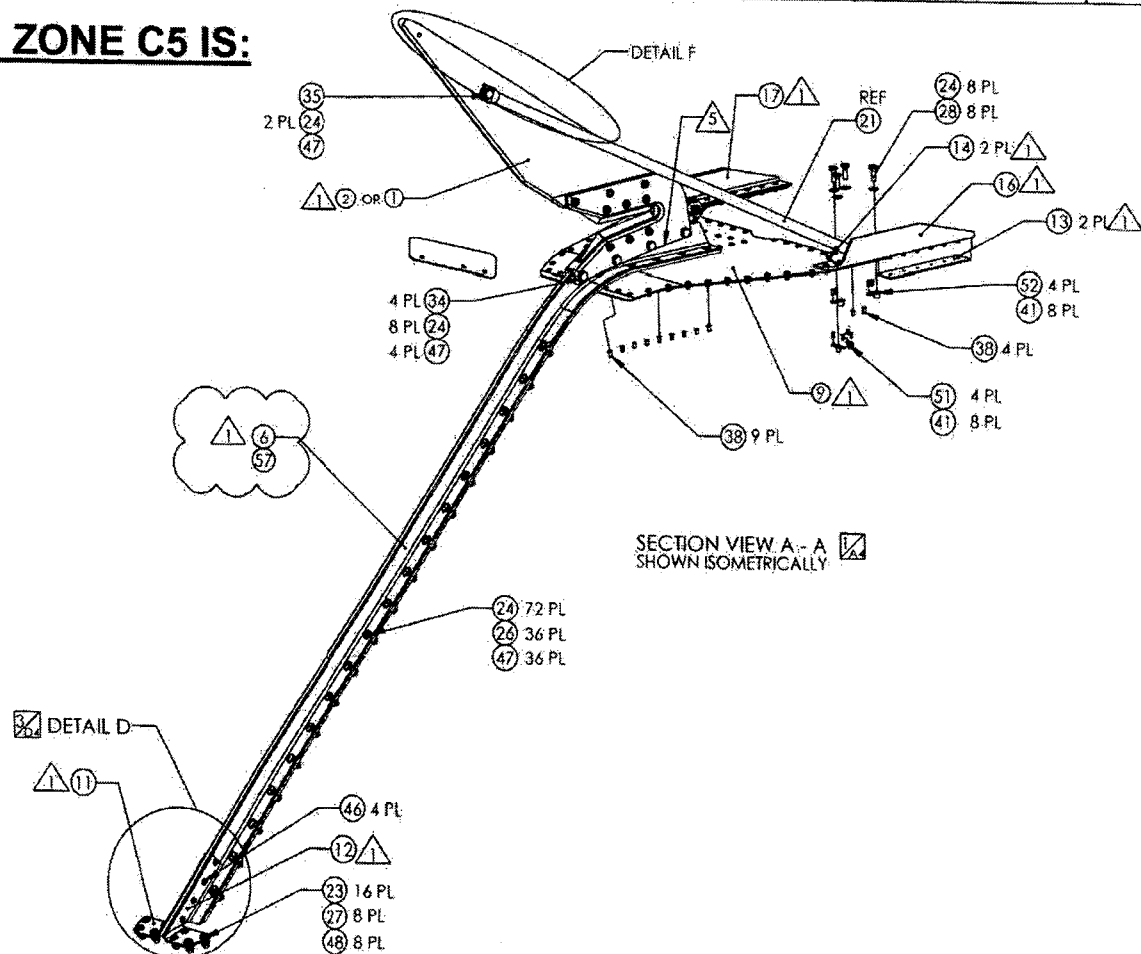
REASON: ADDED F/N 57

ECR:

ACTION ITEM:

1.

SHEET 1, ZONE C5 IS:



SECTION VIEW A-A
SHOWN ISOMETRICALLY

57	A	647.3916	1	1	1	1	DEFLECTOR UPPER HALF					
F/N/TC	PART NUMBER		3704	3703	3702	3701	DESCRIPTION				MATERIAL	SPECIFICATION
			QTY									
DOCUMENTS EFFECTED:							CHANGE CATEGORY				DER REVIEW REQUIRED	
☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM							☐ MAJOR ☒ MINOR				☐ YES ☒ NO	

INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO. 02728

SHEET 1 OF 1

DWG NO. 647.3700

REV: NC

PREPARED
BY

R. ROSANO

DATE: 12/23/09

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: 412 CABLE CUTTERS KIT

APPROVED BY:

ENGR

KMFC

EFF

~~NEXT ORDER~~

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: ADDED MODEL 214 TO APPROPRIATE DESCRIPTIONS

SHEET 1, ZONE D7 IS:

IS

		X					647.3704	204, 205, 212, 214 CABLE CUTTERS KIT HIGH		
			X				647.3703	204, 205, 212, 214 CABLE CUTTERS KIT LOW		
				X			647.3702	412 CABLE CUTTERS KIT HIGH		
					X	FIND	647.3701	412 CABLE CUTTERS KIT LOW		
		.3704	.3703	.3702	.3701	FIND	PART #	DESCRIPTION	MAT'L	SPEC.

F/N	TC	PART NUMBER
-----	----	-------------

2901

QTY

DESCRIPTION

MATERIAL

SPECIFICATION

DOCUMENTS EFFECTED:

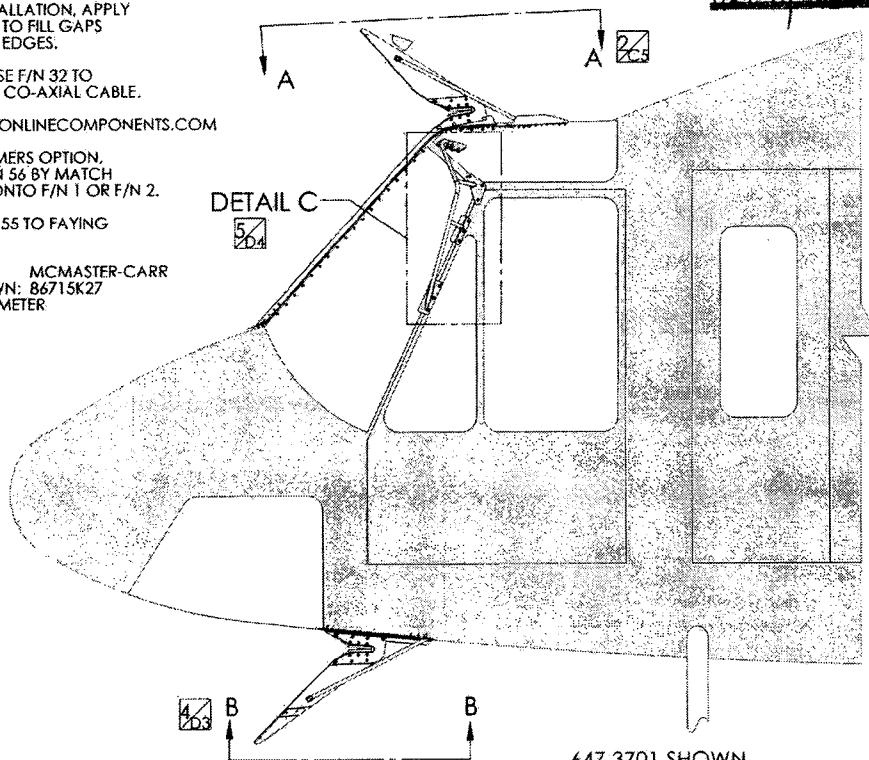
☒ MDL ☒ INSTALL INSTRU ☒ ICA ☒ BOM

CHANGE CATEGORY
☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED
☒ YES ☐ NO

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	LAST PROTOTYPE REVISION: P61		N/C
N/C	INITIAL RELEASE	09/29/09	P. BRAVO

- 1 AFTER INSTALLATION, APPLY F/N 54 A/R TO FILL GAPS AND FILLET EDGES.
- 2 IF REQD, USE F/N 32 TO CONNECT CO-AXIAL CABLE.
- 3 VENDOR : ONLINECOMPONENTS.COM
- 4 AT CUSTOMERS OPTION, INSTALL F/N 56 BY MATCH DRILLING ONTO F/N 1 OR F/N 2.
- 5 APPLY F/N 55 TO FAYING SURFACES.
- 6 VENDOR : MCMMASTER-CARR
VENDOR P/N: 86715K27
60A DUROMETER



647.3701 SHOWN

	REF	REF	REF	REF	56	647.5701	GPS MOUNT KIT			4
	A/R	A/R	A/R	A/R	55	601.2045	RTV		LOCITE 998	1
	A/R	A/R	A/R	A/R	54	601.1012	SEALANT		PR-1225 CLASS B	1
	1	1	1	1	53	601.3083	ADHESIVE RUBBER SEAL		MIL-8-3665	1
	4	4	4	4	52	601.2957	NUTPLATE		MS2107-13	
	4	4	4	4	51	600.0795	NUTPLATE		MS21047-3	
	6	6	6	6	50	601.3066	NUTPLATE		MS21047-106	
	6	6	6	6	49	601.3065	NUTPLATE		MS21047-106	
	18	18	18	18	48	601.2973	LOCKNUT		MS21047-38	
	79	79	79	79	47	601.2943	LOCKNUT		MS21042-5	
	4	4	4	4	46	601.2364	CHEERRY RIVET		CR321-3-4-8	
	28	28	42	42	45	601.1183	CHEERRY RIVET		CR3213-4-5	
	16	16	19	19	44	601.1915	CHEERRY RIVET		CR3213-4-4	
	24	24	32	32	43	601.0790	CHEERRY RIVET		CR3213-4-3	
	31	31	13	13	42	601.1039	CHEERRY RIVET		CR3215-4-2	
	3704	3703	3702	3701	FIND	PART #	DESCRIPTION		MATL	SPEC.

[illegible]

QTY

NEXT ASSY IS

PARTS LIST

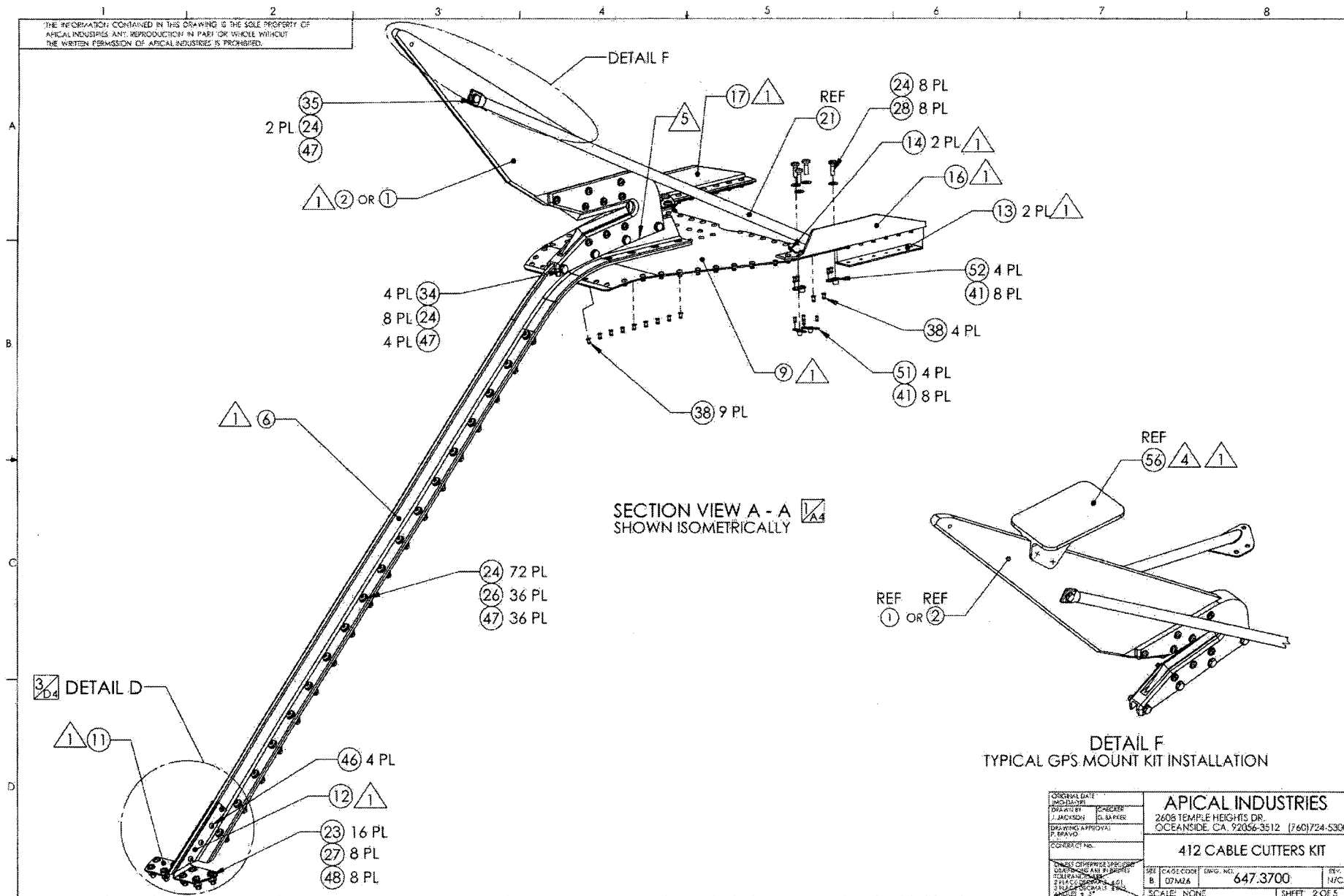
APICAL INDUSTRIES

2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

412 CABLE CUTTERS KIT

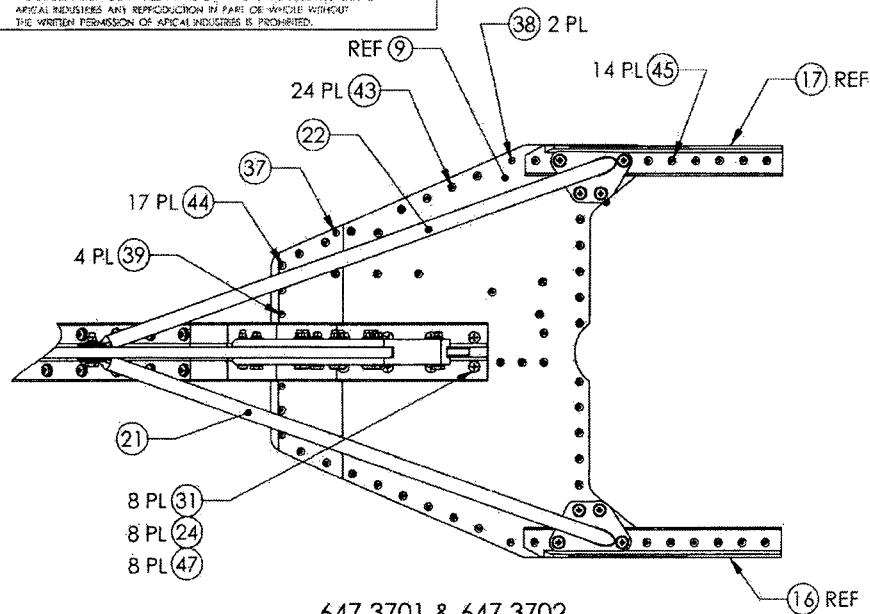
SIZE B	CAGE CODE 07MZ6	QTY. NO. 647,3700	REV. N/C
SCALE NONE		SHEET 1 OF 5	

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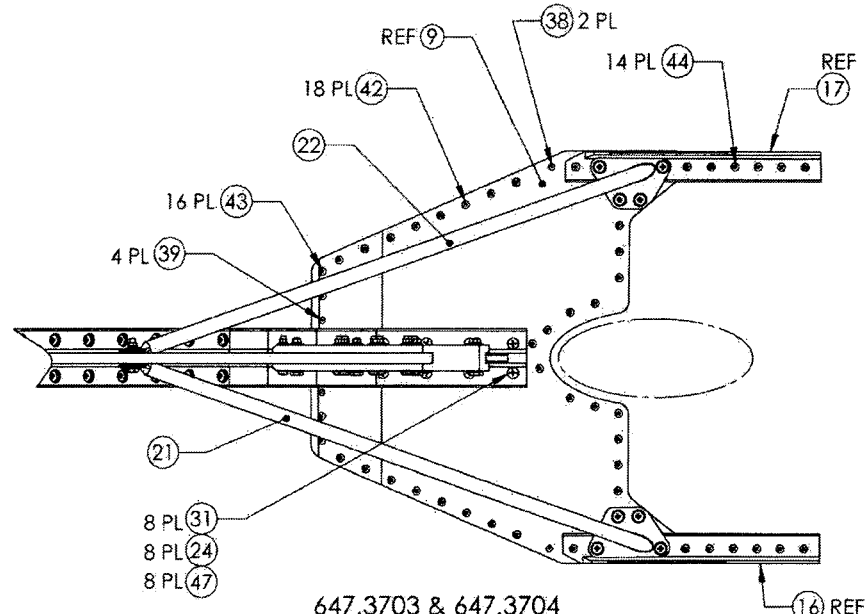


ORIGINAL DATE 1/10/2000		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760)724-5300	
DESIGNED BY J. JACKSON	CHECKED BY G. BARBER	412 CABLE CUTTERS KIT	
DRAWING APPROVAL P. BRAYO	CONTRACT NO.	SEE CAGE CODE B 07M26	DWG. NO. 647.3700
UNLESS OTHERWISE SPECIFIED DIMENSIONS AND TOLERANCES SHALL BE IN INCHES DECIMALS TO TWO PLACES FRACTIONS TO SIXTEENTHS	SCALE: NONE	REV. N/C	SHEET 2 OF 5

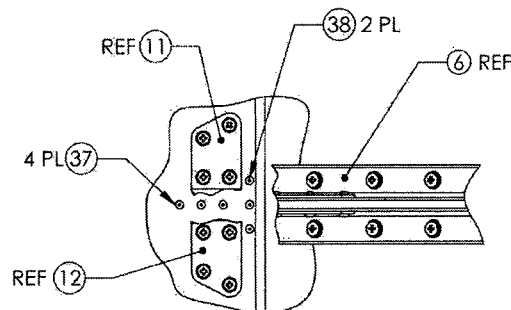
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.



647.3701 & 647.3702
UPPER CUTTER ASSEMBLY
TOP VIEW



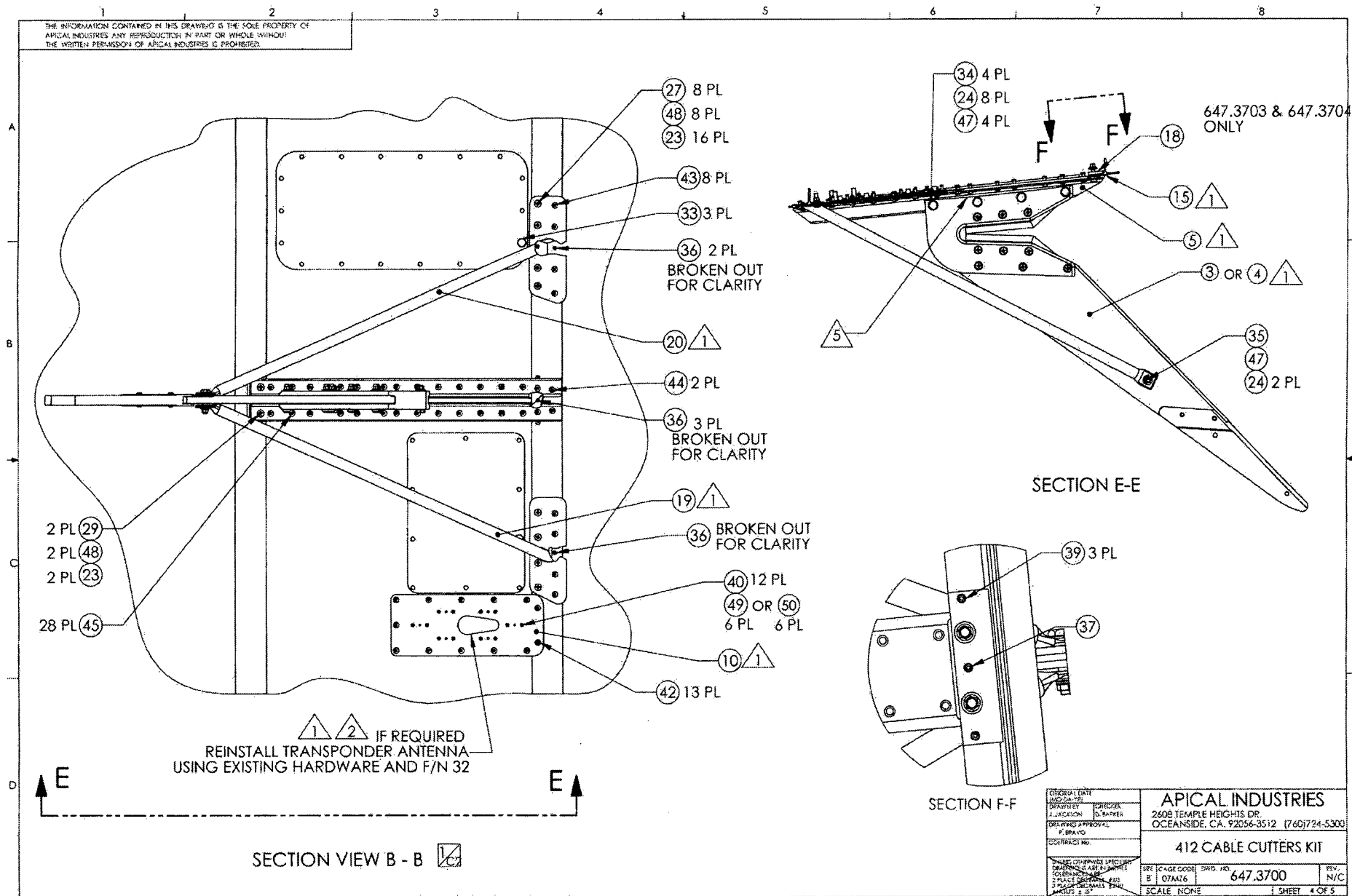
647.3703 & 647.3704
UPPER CUTTER ASSEMBLY
TOP VIEW



DETAIL D
TOP VIEW
BROKEN OUT FOR CLARITY

ORIGINAL DATE 10/01/91		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DESIGNED BY J. JACKSON	CHECKED BY D. BARBER	412 CABLE CUTTERS KIT	
DRAWING APPROVAL T. BRADY		SHEET B	CASE CODE 07M26
EXHIBIT NO.		DWD. NO. 647.3700	REV. N/C
TOLERANCES UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES FRACTIONS 1/16" TO 3/8" DECIMALS .001" TO .005" HOLE SIZE .001" TO .005"		SCALE NONE	SHEET 3 OF 5

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.



BROKEN OUT FOR CLARITY
RH SIDE ONLY

 LH (8)
 OR
 RH (7)

DETAIL C 
LH SHOWN, RH OPPOSITE
2 PL

—(28) 3 PL
(24) 6 PL
(47) 3 PL

53 TRIM TO FIT

26 3 PL
24 6 PL
47 3 PL

②5 6 PL
②4 12 PL
④7 6 PL

ORIGINAL DATE (MM-DD-YY)	APICAL INDUSTRIES		
DRAWN BY (NAME)	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760)724-5300		
CHECKED BY (NAME)	412 CABLE CUTTERS KIT		
PROJECT NO.	SIZE (AGE CODE)	DATE, Y23	REV
INTEGRITY SYSTEMS ENGINEERING & DESIGN 10000 WILSON AVE SUITE 200 MILWAUKEE, WI 53222-3000 TEL: 414-224-1100 FAX: 414-224-1101	B	07/24/62	647.3700
	SCALE	NONE	SHEET 5 OF 5

David Duval

From: Pablo Bravo
Sent: March-24-16 2:32 PM
To: Mario Poulin; Jean-Luc Menard
Cc: Shirley Hay; Melanie Fauteux; Marc Bellavance; David Duval; Joe Bains
Subject: RE: Rivets

Mario,

Using -2 should be acceptable.

Regards,
Pablo

From: Mario Poulin
Sent: Thursday, March 24, 2016 11:30 AM
To: Jean-Luc Menard; Pablo Bravo
Cc: Shirley Hay; Melanie Fauteux; Marc Bellavance; David Duval
Subject: RE: Rivets

Good afternoon,

Any news on this, we need to ship kit on 29th

Thanks,

Mario

From: Jean-Luc Menard
Sent: Thursday, March 24, 2016 8:49 AM
To: Pablo Bravo <pbravo@dartaero.com>
Cc: Shirley Hay <shay@dartaero.com>; Melanie Fauteux <mfauteux@dartaero.com>; Mario Poulin <mpoulin@dartaero.com>; Marc Bellavance <mbellavance@dartaero.com>; David Duval <dduval@dartaero.com>
Subject: RE: Rivets

Hi Pablo,
See below, that series rivet only starts at -2 as per our purchaser, is using a -2 an acceptable deviation?
If yes, I will issue an ECR.
Thx
JL

From: David Duval
Sent: Thursday, March 24, 2016 8:28 AM
To: Jean-Luc Menard <jmenard@dartaero.com>
Cc: Shirley Hay <shay@dartaero.com>; Melanie Fauteux <mfauteux@dartaero.com>; Mario Poulin <mpoulin@dartaero.com>; Marc Bellavance <mbellavance@dartaero.com>
Subject: RE: Rivets

Item #36 601.3082 (CR3212-4-1)

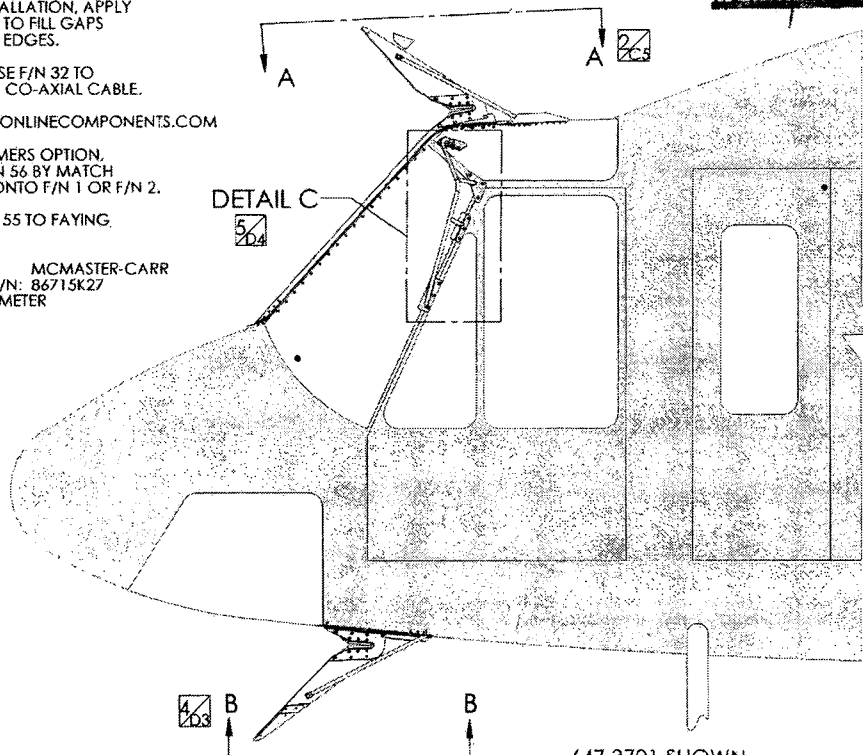
[illegible]

UNINCORPORATED ECN(S)

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	LAST PROTOTYPE REVISION: PRI		N/C
N/C	INITIAL RELEASE	09-05-07	P. BRAGO

NOTES:

- 1 AFTER INSTALLATION, APPLY F/N 54 A/R TO FILL GAPS AND FILLET EDGES.
- 2 IF REQD, USE F/N 32 TO CONNECT CO-AXIAL CABLE.
- 3 VENDOR : ONLINECOMPONENTS.COM
- 4 AT CUSTOMERS OPTION, INSTALL F/N 56 BY MATCH DRILLING ONTO F/N 1 OR F/N 2.
- 5 APPLY F/N 55 TO FAYING SURFACES.
- 6 VENDOR : MCMMASTER-CARR
VENDOR P/N: 86715K27
60A DUROMETER



647.3701 SHOWN

	REF	REF	REF	REF	56	647.5701	GPS MOUNT KIT			4
	A/R	A/R	A/R	A/R	55	c01.2045	RTV			5
	A/R	A/R	A/R	A/R	54	601.1012	SEALANT			1
	1	1	1	1	53	601.3083	ADHESIVE RUBBER SEAL			6
	4	4	4	4	52	601.2957	NUTPLATE		MS2107112	
	4	4	4	4	51	600.0795	NUTPLATE		MS1047-3	
	6	6	6	6	50	601.3066	NUTPLATE		MS2104708	
	6	6	6	6	49	601.3065	NUTPLATE		MS2104706	
	18	18	18	18	48	601.2973	LOCKNUT		MS2104208	
	79	79	79	79	47	601.2943	LOCKNUT		MS2104203	
	4	4	4	4	46	601.2364	CHERRY RIVET		CR3213-4-8	
	28	28	42	42	45	601.1183	CHERRY RIVET		CR3218-4-5	
	16	16	19	19	44	601.1915	CHERRY RIVET		CR3213-4-4	
	24	24	32	32	43	601.0790	CHERRY RIVET		CR3213-4-3	
	31	31	13	13	42	601.1039	CHERRY RIVET		CR3213-4-2	
3704	3703	3702	3701	3700	3701	3700	DESCRIPTION		MATL	SPEC.

[illegible]



04881

SHEET 1 OF 1

DWG NO. 647.3700

REV:	N/C	PREPARED BY
------	-----	-------------

J. BECKER

DATE: 02/26/15

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: 412 CABLE CUTTERS KIT

APPROVED BY: ENGR 

MFG *Don Baker*

QC

EFF. NEXT ORDER

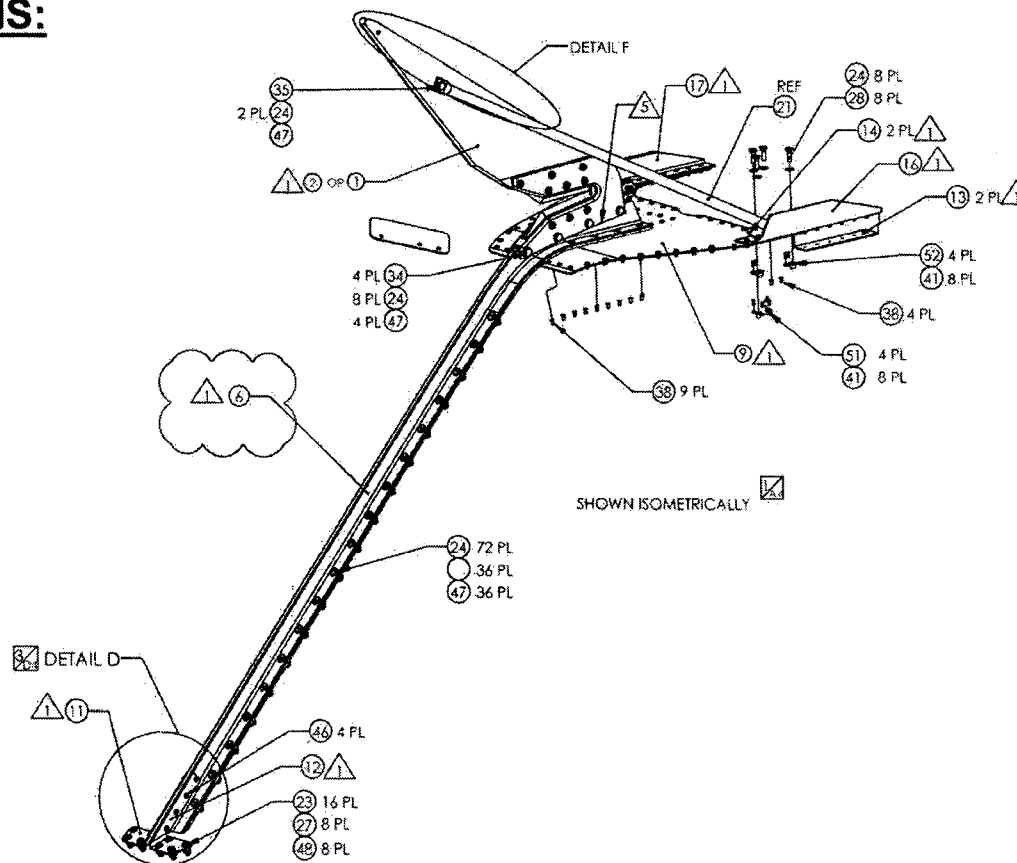
TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: DELETED F/N 57, REVISED F/N 6.

ECR: N/A

SHEET 1, ZONE C5 IS:

ACTION ITEM:
1.



57	D	647.3916	1	1	1	1	DEFLECTOR UPPER HALF			
6	R	647.3903	1	1	1	1	DEFLECTOR ASSEMBLY			
F/N	TC	PART NUMBER	3704	3703	3702	3701	DESCRIPTION		MATERIAL	SPECIFICATION
		QTY								
DOCUMENTS EFFECTED:								CHANGE CATEGORY	DER REVIEW REQUIRED	
☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM								☐ MAJOR ☒ MINOR	☐ YES ☒ NO	



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

ENGINEERING CHANGE NOTICE NO.

04845

SHEET 1 OF 1

DWG NO. 647.3700

REV: N/C

PREPARED BY J. BECKER

DATE: 02/11/15

EFFECT ON DWG

☐ INC. ☒ UNINC.

DWG TITLE: 412 CABLE CUTTERS KIT

APPROVED BY:

ENGR

MFG

QC

EFF.

NEXT ORDER

TRANSACTION CODES (TC):

A-ADD
R-REVISE

C-CREATE
D-DELETE

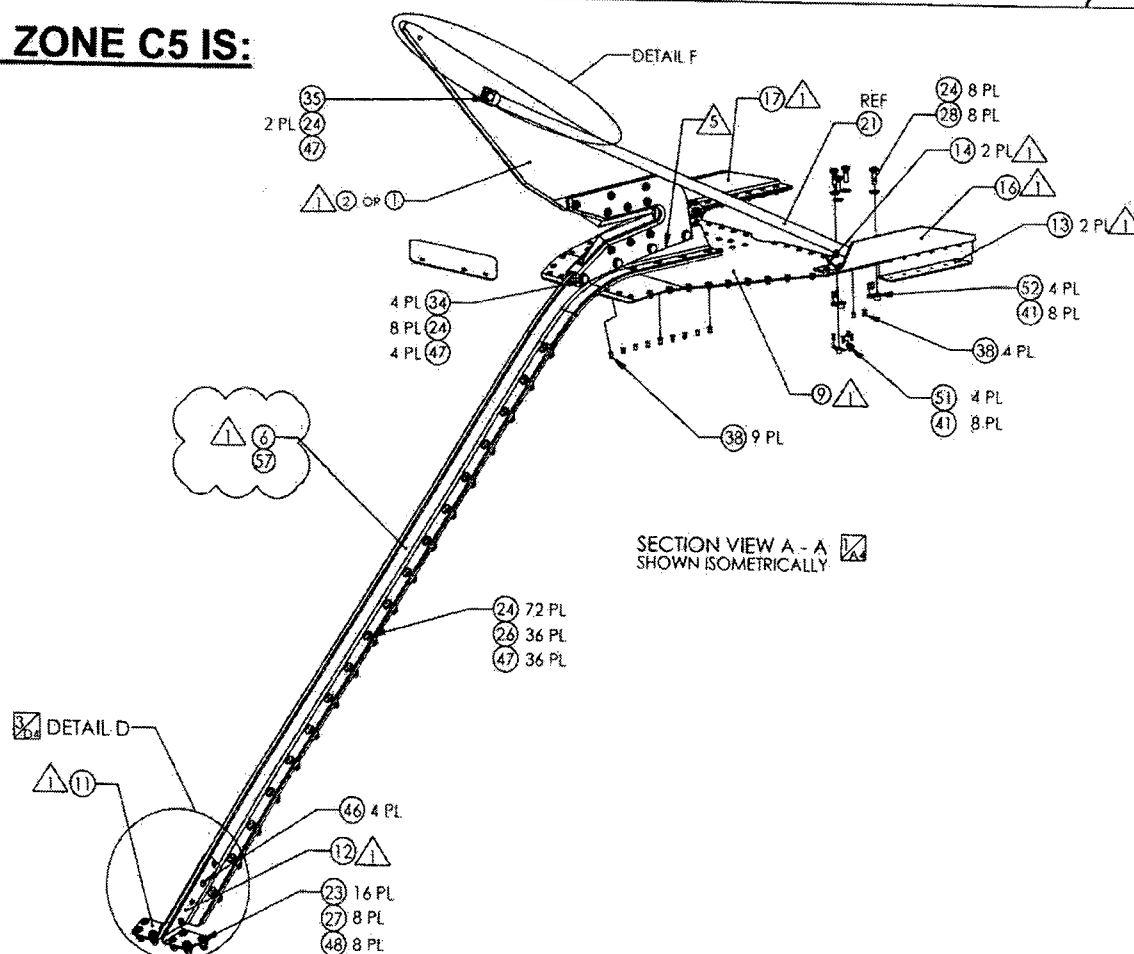
REASON: ADDED F/N 57

ECR:

SHEET 1, ZONE C5 IS:

ACTION ITEM:

1.



57	A	647.3916	1	1	1	1	DEFLECTOR UPPER HALF					
F/N	TC	PART NUMBER	3704	3703	3702	3701	DESCRIPTION				MATERIAL	SPECIFICATION
QTY												
DOCUMENTS EFFECTED:							CHANGE CATEGORY		DER REVIEW REQUIRED			
☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM							☐ MAJOR ☒ MINOR		☐ YES ☒ NO			